Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Please cancel claims 1 through 76 without disclaimer or prejudice.

Please add new claims 77-128.

77. (new): A method for reducing the level of active biological contaminants or pathogens in a tissue, comprising:

(i) adding to the tissue at least one dipeptide stabilizer; and

(ii) irradiating the tissue with a suitable dose of gamma radiation effective to reduce the level of active biological contaminants or pathogens in the tissue.

78. (new): The method according to claim 77, wherein the tissue is hard tissue.

79. (new): The method according to claim 78, wherein the hard tissue is selected from the group consisting of bone, demineralized bone matrix, joints, femurs, femoral heads or teeth.

80. (new): The method according to claim 77, wherein the tissue is soft tissue.

81. (new): The method according to claim 80, wherein the soft tissue is selected from the group consisting of bone marrow, ligaments, tendons, nerves, skin grafts, heart valves, cartilage, corneas, arteries or veins.

82. (new): The method according to claim 77, wherein the tissue is a combination of hard and soft tissue.

83. (new): The method according to claim 77, wherein the tissue is at a temperature below its freezing point during irradiation.

84. (new): The method according to claim 77, wherein the tissue is maintained in an inert atmosphere during irradiation.

85. (new): The method according to claim 84, wherein the tissue is maintained under vacuum during irradiation.

86. (new): A method for reducing the level of active biological contaminants or pathogens in a protein sample, comprising:

(i) adding to the protein sample at least one dipeptide stabilizer; and

(ii) irradiating the protein sample with a suitable dose of gamma radiation effective to reduce the level of active biological contaminants or pathogens in the protein sample.

87. (new): The method according to claim 86, wherein the protein sample is at a temperature below its freezing point during irradiation.

88. (new): The method according to claim 86, wherein the protein sample is maintained in an inert atmosphere during irradiation.

89. (new): The method according to claim 88, wherein the protein sample is maintained under vacuum during irradiation.

90. (new): The method according to claim 86, wherein the protein sample contains at least two different proteins.

91. (new): The method according to claim 90, wherein the protein is an antibody, immunoglobulin, hormone, growth factor, anticoagulant, clotting factor or complement protein.

92. (new): The method according to claim 91, wherein the clotting factor is selected from the group consisting of thrombin, Factor II, Factor V, Factor VII, Factor VIIa, Factor VIII, Factor IX, Factor X, Factor XIII, Factor XIIIa, von Willebrand factor, fibrin or fibrinogen.

93. (new): The method according to claim 91, wherein the immunoglobulin is a polyclonal or

monoclonal immunoglobulin or mixtures thereof.

94. (new): The method according to claim 93, wherein the immunoglobulin is immunoglobulin IgG, immunoglobulin IgM, immunoglobulin IgA, immunoglobulin IgE or mixtures thereof.

95. (new): The method according to Claim 90, wherein the protein is selected from the group consisting of protein C, protein S, alpha-1 anti-trypsin (alpha-1 protease inhibitor), heparin, insulin, butyl-cholinesterase, warfarin, streptokinase, tissue plasminogen activator (tPA), erythropoietin (EPO), urokinase, neupogen, antithrombin-3, alpha-glucosidase and albumin.

96. (new): The method according to claim 90, wherein the protein is produced by recombinant methods.

97. (new): A method for reducing the level of active biological contaminants or pathogens in plasma or serum, comprising:

(i) adding to the plasma or serum at least one dipeptide stabilizer; and

(ii) irradiating the plasma or serum with a suitable dose of gamma radiation effective to reduce the level of active biological contaminants or pathogens in the plasma or serum.

98. (new): The method according to claim 97, wherein the serum is fetal bovine serum.

99. (new): The method according to claim 97, wherein the plasma or serum is at a temperature below its freezing point during irradiation.

100. (new): The method according to claim 97, wherein the plasma or serum is maintained in an inert atmosphere during irradiation.

101. (new): The method according to claim 100, wherein the plasma or serum is maintained under vacuum during irradiation.

102. (new): The method according to claim 77, 86 or 97, wherein the concentration of the at least one dipeptide stabilizer is at least 20 mM.

103. (new): The method according to claim 77, 86 or 97, wherein the concentration of the at least one dipeptide stabilizer is at least 50 mM.

104. (new): The method according to claim 77, 86 or 97, wherein the concentration of the at least one dipeptide stabilizer is at least 100 mM.

105. (new): The method according to claim 77, 86 or 97, wherein the at least one dipeptide stabilizer is homologous.

106. (new): The method according to claim 105, wherein the homologous dipeptide stabilizer is selected from the group consisting of glycine-glycine (Gly-Gly) and tryptophan-tryptophan (Trp-Trp).

107. (new): The method according to claim 77, 86 or 97, wherein the at least one dipeptide stabilizer is heterologous.

108. (new): The method according to claim 106, wherein the heterologous dipeptide stabilizer is selected from the group consisting of β-alanyl-histidine (carnosine), β-alanyl-methylhistidine (anserine) and glycine-tryptophan (Gly-Trp).

109. (new): The method according to claim 77, 86 or 97, further comprising at least one stabilizer that is not a dipeptide.

110. (new): The method according to claim 77, 86 or 97, wherein the at least one stabilizer that is not a dipeptide is selected from the group consisting of thioctic acid, 6,8-dimercapto-octanoic acid, tatranor-dihydrolipoic acid, oleic acid, linoleic acid, palmitic acid, ascorbic acid, palmitoyl ascorbic acid, glutamic acid, 1,3-dimethyluric acid, gallic acid, propyl gallate, tocopherol acetate, beta-carotene, sodium ascorbate, xylose, ribose, mannose, fructose, mannitol, glycerol, trehalose, dimethylsulfoxide (DMSO),

butylatedhyroxytoluene (BHT), butylated hydroxyanisole (BHA), dimethylthiourea, glutathione, lipoic acid, 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid (Trolox), 4-hydroxy-2,2,6,6-tetramethylpiperidin-1-oxyl (Tempol), uric acid, albumin, histidine, N-acetyl cysteine, tryptophan, N-acetyl-tryptophan, methionine, cysteine, histidine, allopurinol, glutathione, citiolone, puercetin, chrysin, N-tert-butyl-alpha-phenyl nitrone, dihydrolopoate, lipoamide, bisonor methyl ester, quercetin, apigenin, aminoflavone, catechin, hesperidin, naringin, piperazine diethanesulfonic acid (PIPES), imidazole, methoxypsoralen (MOPS), 1,2-dithiane-4,5-diol, cholesterol, probucol, thimerosal, lazaroid, tirilazad mesylate, diosmin, pupurogalin and silymarin.

111. (new): The method according to claim 77, 86 or 97, further comprising at least two stabilizers that are not dipeptides.

112. (new): The method according to claim 111, wherein the at least two stabilizers are selected from the group consisting of DMSO, mannitol and trehalose.

113. (new): The method according to claim 112, where the at least two stabilizers are DMSO and mannitol.

114. (new): The method according to claim 77, 86 or 97, further comprising contacting the tissue, protein sample, plasma or serum with at least one sensitizer.

115. (new): The method according to claim 77, 86 or 97, wherein the tissue, protein sample plasma or serum contains at least one residual solvent.

116. (new): The method according to claim 115, wherein the at least one residual solvent is water.

117. (new): The method according to claim 115, wherein the at least one residual solvent is an organic solvent.

118. (new): The method according to claim 115, wherein the organic solvent is selected from the

group consisting of ethanol, isopropanol and polyethylene glycol.

119. (new): The method according to claim 115, wherein the content of the at least one residual solvent is reduced by lyophilization.

120. (new): The method according to claim 119, wherein the content of the at least one residual solvent is less than 2.0 percent.

121. (new): The method according to claim 120, wherein the content of the at least one residual solvent is less than 1.0 percent.

122. (new): The method according to claim 121, wherein the content of the at least one residual solvent is less than 0.5 percent.

123. (new): The method according to claim 122, wherein the content of the at least one residual solvent is less than 0.2 percent.

124 (new): The method according to claim 77, 86 or 97, wherein the tissue, protein sample or plasma or serum is irradiated for a sufficient amount of time to reduce the level of one or more biological contaminants in the tissue, protein sample or serum.

125. (new): The method according to claim 77, 86 or 97, wherein the rate of gamma irradiation is at least about 3.0 kGy per hour.

126. (new): The method according to claim 77, 86 or 97, wherein the rate of gamma irradiation is at least about 16 kGy per hour.

127. (new): The method according to claim 77, 86 or 97, wherein the rate of gamma irradiation is at least about 30 kGy per hour.

128. (new): The method according to claim 77, 86 or 97, wherein the total dose of gamma irradiation is at least about 45 kGy.